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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,402	10/20/2003	Billy Wayne Garrett JR.	9797-0141-999	5944

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EXAMINER

CHACE, CHRISTIAN

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,402

Applicant(s)

GARRETT ET AL.

Examiner

Christian P. Chace

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 15-18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/7/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office action has been issued in response to amendment filed 7 April 2005. Claims 1-18 are pending. Claims 15-18 are withdrawn. Applicants' arguments have been carefully and respectfully considered, but they are not persuasive. Amendments to the claims have necessitated new grounds for rejection. Accordingly, this action has been made FINAL, as necessitated by amendment.

Specification

The disclosure is objected to because of the following informalities: Applicants' amendment to correct paragraph 10 appears to be missing a word in line 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to independent claims 1 and 11, the limitation, "wherein the plurality of memory devices includes at least a first memory device having a first bandwidth and

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the first bandwidth is less than a first data block size divided by a first time period,” appears to be new matter. Applicants recite at page 11 of the instant submission that, “Support for block size is found in paragraph 65 of the [instant] specification.” However, paragraph 65 appears to discuss memories known to those of ordinary skill in the art, and does not discuss bandwidth as it relates to the memory block size and time period. Claims 2-10 and 12-14 depend upon the instant claims and are rejected for at least the reasons set forth supra with respect to same.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Direct Rambus Technology Overview, 1997, pp10-12.

(Examiner also notes that pp17-20 are blank. Accordingly, any information that may have been on them has not been considered).

Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Farmwald et al (US Patent 5,243,703).

With respect to independent claim 1, a memory system is disclosed in figure 9.

A memory controller connected to at least one channel is disclosed as a system or bus master, shown in figure 2, for example, as #11, with a CPU being a master being discussed in column 7, lines4-5. The at least one channel is the primary bus, #18, in

figure 3. The primary bus is connected to the transceiver bus #65 of figure 9, which is included to interface multiple units to a higher order bus, as discussed in column 5, lines 39-41. An external bus being a higher order bus is disclosed in column 7, lines 45-50, for example.

Memory devices connected to the at least one channel is disclosed in figure 9, with #15-#17 being DRAMS, as discussed in column 23, line 1. One of the memory devices being individually incapable of communicating a first data block to/from the memory controller during a first time period is disclosed in column 8, lines 23-27 as a failed memory block. If a device fails, it cannot transmit any data, and, therefore, is incapable of such transmission.

The plurality of memory devices including at least a first memory device having a first bandwidth and the first bandwidth being less than a first data block size divided by a first time period is disclosed in column 2, lines 50-55, e.g.

The memory controller communicating control information to at least a first plurality of the memory devices (the ones not "mapped out" as discussed in column 8, lines 23-27, e.g.) via the at least one first channel is disclosed in column 8, lines 38-50, which discusses accessing the "good" blocks of the memory devices.

The first plurality of memory devices being a multiplexed group on a channel is discussed in column 23, lines 52-53 and in column 24, lines 28-32. In addition, the bus being a multiplexed bus is disclosed in column 10, lines 33-35. By definition, those bus lines communicate data to and from the memory devices [that have not been mapped

out due to failure]. This “first time period” is the specified time referred to in column 9, line 54, for example.

With respect to claims 2 and 12, column 8, lines 45-50 discuss mapping blocks according to addresses, with the block of a next address being “lower” than that of the first. “Lower” is interpreted to be “less than.”

With respect to claims 3, 5, 7, 9, and 13, the at least one channel comprising 2, 4.5, 8, and 4 channels, respectively, is an inherent factor of design choice, as discussed in column 6, line 40, lines 62-63; column 7, lines 45-50, lines 55-57; column 12, lines 21-29, and column 21 and 22, under “Multiple Busses.” Column 4, lines 60-65, explicitly discusses the nature of the choice being within the skill of one of ordinary skill in the art. Figure 9 shows a second plurality of memories connected to the second channel, with each of Primary Busses #18 being a respective channel, with the memories attached thereto.

With respect to claims 4, 6, 8, 10, and 14, the number of memory devices including 16, 16, 8, 8, and 8 memory devices, respectively, is disclosed in column 21, lines 45-60.

With respect to independent claim 11, the claim appears to be very similar to independent claim 1, for which the similar elements will retain similar rejection in light of the applied prior art, with the following exception:

At least one repeater is disclosed in figure 9, #19 as a transceiver.

Conclusion

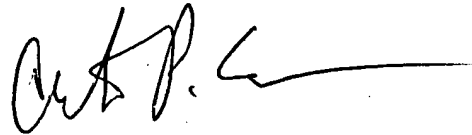
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian P. Chace whose telephone number is 571.272.4190. The examiner can normally be reached on **MAXI FLEX**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571.272.4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'C. P. Chace', followed by a long horizontal line extending to the right.

Christian P. Chace
Primary Examiner
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